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### 14. ABSTRACT

The National Defense Science and Engineering Graduate (NDSEG) Fellowship Program offers three-year fellowships as a means of increasing the number of U.S. citizens trained in science and engineering disciplines of military importance. Sponsored by the Army, Navy, Air Force and Defense Advanced Research Projects Agency (DARPA), these fellowships are offered to individuals who have demonstrated ability and special aptitude for advanced training in science and engineering. NDSEG Fellowships are awarded for study and research leading to doctoral degrees in mathematics, physical, biological, ocean and engineering sciences. This grant supported students sponsored by DARPA for 14 appointments beginning in academic year 1993/1994 and 17 appointments beginning in academic year 1994/1995. This report contains information on these students as well as NDSEG students supported beginning in academic year 1989 through the final class of students who started in academic year 1994/1995.

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# Defense Advanced Research Projects Agency



## National Defense Graduate Fellowship Program

**Final Report** 

Grant # N00014-93-1-1199

September 1, 1993 - August 1, 1999

**Submitted and Prepared by:** 

Jeffrey P. Jarosz and Michael P. Moore

**Projects Office** 

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LICETOP 4

### DARPA-NDSEG Graduate Fellowship Program

Grant N00014-93-1-1199

1 September 1993-31 August 1999

Final Report

Submitted and prepared by:

Jeffrey P. Jarosz and Michael P. Moore Projects Department

### 1. Introduction

Grant N00014-93-1-1199, as subsequently amended, provided \$3,686,854 for the support of the program from September 1, 1993 through August 31, 1999 for the fellows appointed in 1993 and 1994.

This report serves as ASEE's final program report.

### 2. Administration

ASEE made contact with each of the fellows upon notification from DARPA of their selection. ASEE was responsible for the payment of the fellow's stipends and tuition along with a departmental allowance provided to each fellow's graduate institution to cover various expenses related to the fellows' graduate education.

ASEE also had regular reporting requirements. At the end of each academic year, ASEE required all fellows to complete a summer plan form and a faculty adviser was asked to certify the student's progress. These academic reports were then compiled into a single report for DARPA. ASEE was also required to submit regular administrative and financial reports describing ASEE's grant management activities and providing a complete financial accounting for the period.

### 3. Financial management and reporting

Three grants plus amendments were awarded to conduct the program from August 1, 1989 through August 31, 1999. A total of \$10,752,161 were authorized to conduct the program for six groups of fellows (three years for each group) through August 31, 1999. ASEE periodically submitted vouchers for advance payment of student support and administrative expenses.

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### 4. Stipend and Tuition Payments

From September 1989 through August 1990 ASEE paid fellowship stipends with personal checks

issued manually by ASEE's accounting department. Since September 1990, stipends have been deposited electronically into fellows' bank accounts on the first working day of each month. Fellows can elect to have stipends deposited into checking or savings accounts.

Tuition payments were made on behalf of the fellows to their respective graduate institutions. ASEE contacted the office of the bursar at each fellow's institution to receive the bills for the tuition and required fees. Upon receipt of the bill, ASEE would issue the appropriate payments.

Departmental allowances were paid to the fellows' graduate institutions at the conclusion of the academic year. After receiving the fellow's academic report and the advisor's certification of academic progress, the payments were issued

### 5. Statistics on DARPA-NDSEG fellows

101 DARPA-funded NDSEG fellows were appointed between 1989 and 1994. Of the 101, 15 fellows withdrew before their three year tenure had completed and two never attended graduate school. Of the 84 fellows who completed their three-year tenure, at least 70 received their Ph.D. based upon correspondence with ASEE after the completion of their tenure.

Women constituted a little less than a third of the appointments (32 out of 101) and only about a sixth of the appointees were from under-represented minority groups (16 out of 101). As a whole, non-minority males made up more half of the appointees (59 out of 101), with non-minority females representing a quarter of the appointments (26 out of 101). Three charts are included as Attachment A. Chart 1 shows the breakdown of appointees by gender, Chart 2 shows the breakdown of appointees by ethnicity, and Chart 3 shows the breakdown of appointees by gender and ethnicity.

DARPA-funded NDSEG fellows represented six of the possible 15 disciplines, Chemical Engineering, Computer Science, Electrical Engineering, Manufacturing Science & Engineering, Materials Science & Engineering, and Mathematics. More than two-thirds of the appointments (70 out of 101) were made in the disciplines Electrical Engineering (24 fellows), Materials Science & Engineering (25 fellows), and Mathematics (21 fellows). Chemical Engineering and Manufacturing Science & Engineering each had 14 fellows while Computer Science applicants received only 3 appointments, all in 1989.

Upon completion of their tenure, all fellows were sent a closing letter which encouraged the fellows to maintain correspondence with ASEE regarding their continuing academic progress. To that end, a tracking form was included with the closing letter requesting their mailing address, telephone number, and immediate plans regarding their education, whether or not they intended to continue towards the Ph.D. Forms received by ASEE indicated that most fellows intended to complete their doctorate and anticipated completion within a single academic year.

Two years after their fellowship concluded, ASEE sent another letter to each fellow inquiring about their current status. From the responses to these follow-up questionnaires, ASEE determined that at least 70 of the 86 fellows who completed their tenure had received their Ph.D.,

while fellows had decided not to pursue their doctorates. The remaining fourteen fellows did not respond to the questionnaire. Therefore, more than two-thirds and probably more than three-quarters of the DARPA-funded NDSEG fellows received their doctoral degree as a result of the support they received from this program.

### Attachments:

Attachment A is a listing of all of the fellows appointed by DARPA from 1989 to 1994 with their graduate institution, whether or not they completed their three year tenure, the date of their Ph.D. (if known), and last-known employment. Attachment B is a chart showing the number of appointments per year and the number of confirmed Ph.D. recipients from each class and the number of drop-outs from each class. Attachment C is the Drop-Out Report listing all of the fellows who withdrew from the program prior to the completion of their tenure and the reasons they withdrew. Attachment D is a graph of the Appointments by Discipline for 1993 and 1994. Attachment E is a chart of selections by discipline for all appointees and for those who have received their Ph.D. from 1989 - 1994. Attachment F is a series of charts showing the breakdown, by gender and/or ethnicity for DARPA-funded NDSEG fellows. Attachment G is a compilation of comments ASEE received from fellows at the conclusion of their tenure.

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Yes 6/99 Yes 8/98 Yes 5/98 Yes 12/98 No no No no Yes 6/96 FYes 6/96 FYes 6/98 Yes 9/99 Yes 9/99 Yes 12/99 Yes 5/99 Yes 6/98 Yes 6/98 Yes 6/98 Yes 6/98 Yes 6/98 Yes 12/97 Yes 6/98 Yes 6/98 Yes 6/98 Yes 6/98 Yes 6/98	Name	School	V	Date of Ph.D.	Date of Ph.D. Last Known Employer
Sanford University Yes Supply  Brown University California, Berkeley Yes 5/98  University of California, Berkeley Yes 12/98  University of California, Berkeley No no No no University of California, Los Angeles Yes 6/96  ise University of California, Los Angeles Yes 6/96  ise University of California, Los Angeles Yes 6/96  ise University of California, Los Angeles Yes 6/98  ise University of California, Los Angeles Yes 6/98  ise University of Massachusetts Institute of Technology Yes 6/98  ise Massachusetts Institute of Technology Yes 6/98  Massachusetts Institute of Technology Yes 6/98  ichel Sanford University No	n, Edward	Massachusetts Institute of Technology	Yes		
Herr Stanford University Yes 8/98  Brown University of California, Berkeley Yes 5/98  University of California, Berkeley No no 1  University of California, Berkeley No no 1  University of California, Berkeley No no 1  Stanford University of Michigan Yes 8/98  Bise University of Michigan Yes 8/98  Massachusetts Institute of Technology Yes 6/98  Wassachusetts Institute of Technology Yes 12/99  Whassachusetts Institute of Technology Yes 6/98  Massachusetts Institute of Technology Yes 6/98  Inviversity of California, Berkeley Yes 6/99  Massachusetts University of California, Berkeley Yes 6/98  Inviversity of California, Berkeley Yes 6/98  Inviversity of California, Berkeley Yes 6/98  Texas A&M University of California, Berkeley Yes 6/98  Texas A&M Universit	ark	Stanford University	Yes	66/9	
Brown University University of California, Berkeley University of California, Berkeley University of California, Berkeley University of California, Berkeley S. Susan Cornell University of California, Los Angeles Stanford University Massachusetts Institute of Technology Wes Massachu	Alexander	Stanford University	Yes	86/8	
Frederick University of California, Berkeley Yes 1298 Frederick University of California, Berkeley No no University of California, Berkeley No no No no University of California, Los Angeles Yes 6/96 Fis. Susan Cornell University of California, Los Angeles Yes 6/96 Fis. Susan Cornell University of Michigan No no No no Nassachuserts Institute of Technology Yes 12/99 Fight University of Dayton Yes 12/99 Fight University of Dayton Yes 19/94 Appointments - 14  School Massachuserts Institute of Technology Yes 6/98 Fishele Stanford University of Technology Yes 9/99 Fishele Stanford University of Technology Yes 9/99 Fishele Stanford University of California, Berkeley Yes 9/99 Fishele University of California, Berkeley Yes 9/99 Fishele University of California, Berkeley Yes 6/98 Fishele Northwestern University Yes 6/98 Fishele Northwestern University Yes 6/98 Fishele Fishele Stanford University of California, Berkeley Yes 6/98 Fishele Fishele Stanford University of California, Berkeley Yes 6/98 Fishele F	Sigal	Brown University	Yes	86/9	Visiting Professor at Brown University
University of California, Berkeley  University of California, Berkeley  University of California, Los Angeles  Cornell University  University of Michigan  Stanford University  University of Dayton  Massachusetts Institute of Technology  University of California, Berkeley  Ves  12,99  Worthwestern University  Yes  12,99  Northwestern University  Yes  12,99  Northwestern University  Yes  12,99	/ivek	University of California, Berkeley	Yes	12/98	Employed by Lucent Technologies
University of California, Berkeley  University of California, Los Angeles  Comell University  University of Michigan  Stanford University  University of Dayton  Massachusetts Institute of Technology  Massachusetts	ndt, Frederick	University of California, Berkeley	N <sub>o</sub>	ou	Withdrew early
University of California, Los Angeles  Comell University University of Michigan Stanford University University of Dayton  Massachusetts Institute of Technology Ves Stanford University  Massachusetts Institute of Technology  Mossachusetts  Mossachusetts	apoe	University of California, Berkeley	Š	no	Withdrew early
Cornell University University of Michigan Stanford University Massachusetts Institute of Technology Ves School Massachusetts Institute of Technology Massachusetts Institute of Technology Stanford University Massachusetts Institute of Technology Stanford University Massachusetts Institute of Technology Stanford University Johns Hopkins University Massachusetts Institute of Technology Stanford University Stanford University Massachusetts Institute of Technology Stanford University Massachusetts Institute of Technology Massachusetts Massac	npour, Marjohn	University of California, Los Angeles	Yes	96/9	Employed by Hughes Aircraft
University of Michigan  Stanford University  Massachusetts Institute of Technology  Ves  Stanford University  University of Dayton  Massachusetts Institute of Technology  Ves  12/99  University of California, Berkeley  Ves  Morthwestern University  Ves  12/99  Northwestern University  Ves  12/99  Northwestern University  Ves  12/99  Northwestern University  Ves  12/99  Northwestern University  Ves  12/99	toberts, Susan	Cornell University	Yes	86/8	Faculty Member at University of Massachusetts
Stanford University  Massachusetts Institute of Technology  Stanford University  University of Dayton  Massachusetts Institute of Technology  Monor Monor Monor Monor Monor  Monor Monor Monor Monor Monor  Monor Monor Monor Monor Monor  Monor Monor Monor Monor Monor Monor  Monor Mono	ti, Denise	University of Michigan	Yes		
Stanford University of Dayton  Massachusetts Institute of Technology  Ves 12/99  University of Dayton  1993 Appointments - 14  1994 DARPA Appointees  School  Massachusetts Institute of Technology  Mon  University of University  University of California, Berkeley  University of California, Berkeley  University of California, Berkeley  Wes  University of California, Berkeley  University of California, Berkeley  Wes  Monthwestern University  Ves  Monthwestern University  Monthwestern Uni	cenneth	Stanford University	Š	ou	Withdrew early
Stanford University of Dayton  University of Dayton  1993 Appointments - 14  1994 DARPA Appointess  School  Massachusetts Institute of Technology  Stanford University  Stanford University  Oniversity of California, Berkeley  University of California, Berkeley  University of California, Berkeley  Wes  Oniversity of California, Berkeley  University of California, Berkeley  University of California, Berkeley  Wes  Oniversity of California, Berkeley  University of California, Berkeley  Ves  Oniversity of California, Berkeley  Ves  Oniversity of California, Berkeley  Ves  Oniversity of California, Berkeley  Ves  12/99  Northwestern University  Yes  12/98	ohn	Massachusetts Institute of Technology	Yes	86/9	Senior Developer at Kenan Systems Corporation
University of Dayton  1993 Appointments - 14  1994 DARPA Appointees School  Massachusetts Institute of Technology Stanford University Johns Hopkins University  University of California, Berkeley  Wes  12/99  University of California, Berkeley  Ves  6/98  University of California, Berkeley  Ves  6/98  Ves  6/98  Ves  6/98  Ves  6/98  Ves  6/98  Ves  6/98  Texas A&M University  Ves  6/98	on, Dwight	Stanford University	Yes	12/99	
1993 Appointments - 14  1994 DARPA Appointees School  Massachusetts Institute of Technology  Massachusetts Institute of Technology  Massachusetts Institute of Technology  Stanford University  University of Illinois  Wassachusetts Institute of Technology  Stanford University of Illinois  University of California, Berkeley  Wassachusetts Institute of Technology  Ves  University of California, Berkeley  University of California, Berkeley  Wes  University of California, Berkeley  Wes  University of California, Berkeley  Wes  University of California, Berkeley  Ves  (A)  Ves	imberly	University of Dayton	Yes	Yes, no date	
School  Massachusetts Institute of Technology  Stanford University  Johns Hopkins University  University of California, Berkeley  University of California, Berkeley  Wes  University of California, Berkeley  University of California, Berkeley  Wes  University of California, Berkeley  University of California, Berkeley  Wes  12/99  University of California, Berkeley  Wes  12/97  Yes  12/99  Texas A&M University			1993 Appointmen	ts - 14	
School  Massachusetts Institute of Technology  Moniversity  Moniversity  University of California, Berkeley  Massachusetts Institute of Technology  Massachusetts Institute of		1	994 DARPA App	ointees	
Massachusetts Institute of Technology  Massachusetts Inst		School		Date of Ph.D.	Last Known Employer
Massachusetts Institute of Technology  Massachusetts Institute of Technology  Massachusetts Institute of Technology  Stanford University  University of Illinois  University of California, Berkeley  Wassachusetts Institute of Technology  Wassachusetts Institute of Technology  Wassachusetts Institute of Technology  Wes  University of California, Berkeley  Wes  University of California, Berkeley  Wes  Syes  University of California, Berkeley  Wes  University of California, Berkeley  Wes  Syes  University of California, Berkeley  Wes  Syes  University of California, Berkeley  Wes  Syes  Syes  Syes  University of California, Berkeley  Wes  Syes	Richard	Massachusetts Institute of Technology	Yes		
Massachusetts Institute of Technology Yes  Massachusetts Institute of Technology Yes  Massachusetts Institute of Technology Yes  Stanford University  Stanford University  Stanford University  Johns Hopkins University  Ves  Johns Hopkins University  University of California, Berkeley  Wassachusetts Institute of Technology  Wassachusetts Institute of Technology  University of California, Berkeley  Wes  University of California, Berkeley  Ves  Un	in, Mira		N <sub>o</sub>	ou	Accepted, never made further contact
Massachusetts Institute of Technology  Massachusetts Institute of Technology  Stanford University  Stanford University  Johns Hopkins University  University of California, Berkeley  University of Utah  Northwestern University  Ves  12/97  Northwestern University  Texas A&M University  Texas A&M University  Yes  12/98	acey	Massachusetts Institute of Technology	Yes	86/9	
Massachusetts Institute of Technology  Stanford University  Stanford University  Stanford University  Stanford University  Johns Hopkins University  University of Illinois  University of Illinois  Wassachusetts Institute of Technology  Wassachusetts Institute of Technology  University of California, Berkeley  Wassachusetts Institute of Technology  Wes  University of Utah  Northwestern University  Northwestern University  Northwestern University  Texas A&M University  Yes  12/99  Texas A&M University  Yes  12/98	rian	Massachusetts Institute of Technology	Yes		Tenure Extended
Stanford University Stanford University Stanford University Stanford University Johns Hopkins University  University of Illinois  University of California, Berkeley  Wassachusetts Institute of Technology  Wassachusetts Institute of Technology  University of California, Berkeley  Ves  University of Utah  Northwestern University  Northwestern University  Texas A&M University  Yes  12/99  Texas A&M University  Yes  12/98	o, Rebecca	Massachusetts Institute of Technology	Yes	86/9	
Stanford University Johns Hopkins University  University of Illinois  University of Illinois  University of California, Berkeley  Wassachusetts Institute of Technology  Wassachusetts Institute of Technology  Wes  University of California, Berkeley  Ves  University of Utah  Northwestern University  Northwestern University  Texas A&M University  Yes  6/98  12/99  Texas A&M University  Yes  12/99	no, Michel	Stanford University	Yes	66/6	Tenure Extended
Johns Hopkins University       No       no         University of Illinois       No       no         University of Illinois       Yes       12/99         Massachusetts Institute of Technology       Yes       9/99         University of California, Berkeley       Yes       5/99         University of Utah       Yes       6/98         Northwestern University       Yes       6/98         Northwestern University       Yes       12/99         Texas A&M University       Yes       6/98	, Jeffrey	Stanford University	Yes		Tenure Extended
University of Illinois No no  University of California, Berkeley Yes 12/99  Massachusetts Institute of Technology Yes 9/99  University of California, Berkeley Yes 5/99  University of Utah  Northwestern University Yes 6/98  University of California, Berkeley Yes 12/97  Northwestern University Yes 6/98  Texas A&M University Yes 6/98	isa	Johns Hopkins University	No	ou	Withdrew early
University of California, Berkeley Yes 12/99  Massachusetts Institute of Technology Yes 9/99  University of California, Berkeley Yes 5/99  ael University of Utah  Northwestern University Yes 6/98  i, University of California, Berkeley Yes 12/99  rles Northwestern University Yes 6/98  Texas A&M University Yes 12/99	'an Antwerp,	University of Illinois	Š	Ou	Withdrew early
Massachusetts Institute of Technology Yes 9/99   University of California, Berkeley Yes 5/99   California, Berkeley Yes 12/97   Northwestern University of California, Berkeley Yes 12/99   California, Berkeley Yes 12/99   Carsas A&M University Yes 6/98   Carsas A&M University Yes 12/98   Carsas A&M University Ye	ristala	University of California, Berkeley	Yes	12/99	Employed by Merck & Company
University of California, Berkeley Yes 5/99 University of Utah Northwestern University University of California, Berkeley Yes 6/98 University of California, Berkeley Yes 12/99 Ss Northwestern University Yes 6/98 Texas A&M University Yes 12/98	Olivera	Massachusetts Institute of Technology	Yes	66/6	Postdoctoral Fellow @ Massachusetts Inst of Tech
University of Utah  Northwestern University  University of California, Berkeley  Solution of California, Berkeley  Yes  12/99  12/99  Solution of California, Berkeley  Yes  12/99  Texas A&M University  Yes  12/98	ven	University of California, Berkeley	Yes	66/5	Quantitative Researcher at Arbitrade LLC
Northwestern University Yes 6/98 University of California, Berkeley Yes 12/99 les Northwestern University Yes 6/98 Texas A&M University Yes 12/98	s, Michael	University of Utah	Yes	12/97	Faculty Member at Khon Kaen University in Thailand
University of California, Berkeley Yes 12/99 les Northwestern University Yes 6/98 Texas A&M University Yes 12/98	iates	Northwestern University	Yes	86/9	
Northwestern University Yes 6/98 Texas A&M University Yes 12/98	naswami, ishna	University of California, Berkeley	Yes	12/99	
Texas A&M University Yes	lla, Charles	Northwestern University	Yes	86/9	Senior Research Associate at the Ohio Aerospace Institute
	/esley	Texas A&M University	Yes	12/98	

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	School	Completed Lenure	Date of Ph.D.	Completed Tenure Date of Ph.D. Last Known Employer
Alter, Tao	Massachusetts Institute of Technology	Yes	96/9	Postdoctoral Fellow @ MIT
Blair, David	Brandeis University	Yes	5/93	
Bronski, Jared	Princeton University	Yes		
Daugherty, John	University of California, Berkeley	Yes	12/93	
Desch, Paul	Illinois Institute of Technology	Yes	96/5	Postdoctoral Fellow @ Los Alamos National Laboratory
Forstall, Bruce	University of California, Berkeley	Yes		
Fowler, Burt	University of Texas	Yes	12/92	Employed by Sematech
Gaynor, Gavin	North Carolina State University	Yes		
Hoppel, Christopher	Pennsylvania State University	Yes	5/93	Employed by U.S. Army Research Laboratory
Horigan, John	University of California, Berkeley	Yes	ou	Employed by Intel Corporation
Hosch, William	University of Arizona	Š	ou	Withdrew early
Hufnagel, Todd	Stanford University	Yes	6/94	
Konstan, Joseph	University of California, Berkeley	Yes		
Liberatore, Michael	Massachusetts Institute of Technology	Yes	2/95	
McComb, Todd	Rensselaer Polytechnic University	Yes	Yes, no date	
Nagorka, Michael	University of California, Santa Barbara	Yes	Yes, no date	Yes, no date Employed by Kaiser Aluminum & Chemical Corporation
Phan, Tan	North Carolina State University	Yes	5/94	
Roy, H. Scott	Stanford University	Yes	9/93	
Skaja-Robinson, Anne	University of Illinois	Yes	12/93	
Storch, David	Northwestern University	Yes	3/93	
Walton, Donnell	University of Michigan	Yes	5/94	Faculty Member at Howard University
Yen, Anthony	Massachusetts Institute of Technology	Yes	Yes, no date	Yes, no date Employed by Texas Instruments

# 1989 Appointments - 22

# 1990 DARPA Appointees

		DAN DAM A Appointed	2211	
Name	School		Date of Ph.D	Date of Ph.D. Last Known Employer
Boyd, Mary	Massachusetts Institute of Technology	Yes	9661	
Chance, Frank	Comell University	Yes	1993	President, Chance & Robinson, Inc.
Chen, Katherine	Massachusetts Institute of Technology	Yes	96/9	Postdoctoral Fellow @ Los Alamos National Laboratory
Gonzalez, Carlos	North Carolina State University	Yes	5/94	
Grady, Brian	University of Wisconsin	Yes	1/94	Faculty Member at University of Oklahoma
Hague, Douglas	Pennsylvania State University	Yes	1995	Employed by Pratt & Whitney
Hoffoss, L. Diane	University of California, Santa Barbara	Yes	96/9	
Huff, Marylin	University of Minnesota	Yes	6/94	
Jarvis, Tyler	Princeton University	Yes	7/94	
Keckler, Stephen	Massachusetts Institute of Technology	Yes	96/9	
Romano, David	University of California, Berkeley	Yes		
Sears, Pamela	University of California, Berkeley	Yes		
Wissuchek, Donald	University of California, Santa Barbara	Yes	2/95	

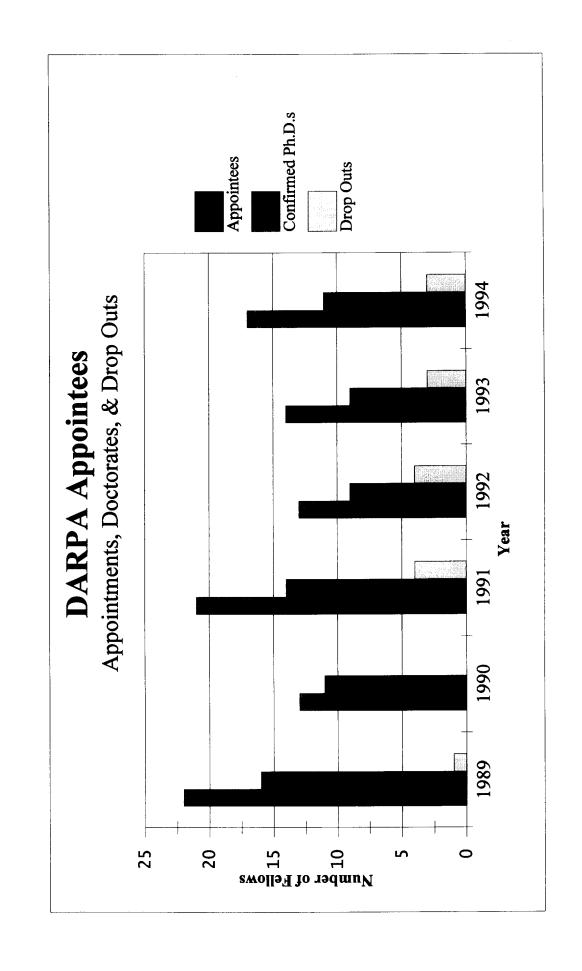
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Date of Ph.D. Last Known Employer	4 Employed by Alliant Techsystems	date Employed by Motorola	Fellow at National Cancer Institute	6 Employed by General Electric	Employed by IBM	Withdrew early	Withdrew early			Employed by Six Flags Great Adventure			4	date	Withdrew early, National Guard obligations	5 Postdoctoral Fellow @ Lehigh University	date	Employed by Corvis Corporation	Withdrew early		Faculty Member at University of Wisconsin, Platteville
Date of P	12/94	Yes, no date	8/95	12/96	6/93	ou	ou	16/9	1/97	ou			12/94	Yes, no date	Ou	10/95	Yes, no date	8/93	ou	5/95	1994
	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Š	Yes	Yes	Yes	No	Yes	Yes
School	Northwestern University	University of Michigan	Cornell University	Stanford University	Massachusetts Institute of Technology	Louisiana State University	University of Wisconsin	Northwestern University	Cornell University	Johns Hopkins University	University of California, Berkeley	University of Minnesota	University of Texas	Georgia Institute of Technology	Boston University	Lehigh University	Rice University	Massachusetts Institute of Technology	University of Arizona	Massachusetts Institute of Technology	Northern Illinois University
Name	Beissel, Stephen	Christenson, Cheryl	Cronin, Kathleen	Dris, Irene	Eide, Ellen	Ervin, Carmelita	Fuerlinger, Susan	Guyer, Jonathan	Jones, Martha	Laird, William	Landau, Zeph	McDonnell, Charles	McGuire, Kenneth	Montoya, Thomas	Morin, Christopher	Polashenski, William	Selesnick, Ivan	Simmons, Jane	Speer, Stephen	Tepesch, Patrick	Wills, Sheryl

# 1991 Appointements - 21

# 1992 DARPA Appointees

Date of Ph.D. Last Known Employer	no Withdrew early	26/9	12/97	5/97 Employed by Mobil Technology Company	9/95 Employed by Corning, Inc.	no Withdrew early	96/8	5/96 Faculty Member at University of Mississippi	no Withdrew early	12/96	6/97 Employed by Wiss, Janney, Ellstner & Associates	8/98 Faculty Member at Harvard University	Yes, no date Employed by General Motors	
:	No	Yes	Yes	Yes	Yes	Š	Yes	Yes	N <sub>o</sub>	Yes	Yes	Yes	Yes	
School	Massachusetts Institute of Technology	University of California, San Diego	University of California, Berkeley	Massachusetts Institute of Technology	Rutgers University	University of California, Berkeley	Stanford University	University of Mississippi	Carnegie Mellon University	University of Washington	Northwestern University	University of Chicago	Purdue University	
Name	Ansari, Mohsinuddin	Brockman, William	Brown, Stanley	Clay, Russell	Dejneka, Matthew	Kahn, Jeremy	Kao, Camilla	Lackey, Eileen	Mullner, James	O'Connor, Caitlin	Tracy, Sharon	Wang, Steven	Witzerman, James	



### **DARPA-NDSEG Dropout Report**

The DARPA-NDSEG fellows who forfeited their funding before obtaining their Ph.D were:

### 1989 Selections

Forstall, Bruce - Electrical Engineering Bronski, Jared - Mathematics

### 1991 Selections

Fuerlienger, Susan - Manufacturing Engineering Morin, Christopher - Manufacturing Engineering Speer, Steve - Mathematics Ervin, Carmelita - Manufacturing Engineering Villeneuve, Randall - Oceanography

### 1992 Selections

Ansari, Mohsinuddin - Electrical Engineering Kahn, Jeremy - Mathematics Mullner, James - Manufacturing Science

### 1993 Selections

Lynn, Lapoe - Electrical Engineering Hildebrandt, Frederick - Mathematics Quon, Kenneth - Electrical Engineering

### 1994 Selections

Evans, Lisa - Mathematics Jewett van Antwerp, Jennifer - Chemical Engineering

### 1989 Selections

Bruce Forstall earned his Master's Degree from University of California, Berkeley. Mr. Forstall withdrew from the NDSEG Fellowship Program after receiving his Master's Degree. Mr. Forstall indicated he wanted to pursue job opportunities in the computer software industry. He did not indicate his future plans to continue his doctoral studies at a later date.

Jared Bronski earned his Master's Degree from Princeton University. Mr. Bronski requested and was granted a leave of absence due to personal reasons. Mr. Bronski did not resume his fellowship after his leave of absence. He did not indicate his future plans to continue his doctoral studies at a later date.

### 1991 Selections

Susan Fuerlienger earned her Master's Degree from University of Wisconsin-Madison. Ms. Fuerlienger indicated she longer wished to continue her graduate studies after receiving her Master's Degree. Ms. Fuerlienger obtained employment after withdrawing from the NDSEG Fellowship Program. She did not indicate her future plans to continue her doctoral studies at a later date.

Christopher Morin attended Boston University. In October 1992 Mr. Morin was called to active duty in the National Guard. Mr. Morin enrolled in the National Guard flight school and expected to be out of the NDSEG Fellowship Program at least two years. Mr. Morin did not contact the NDSEG Fellowship any further once he was called to active duty. He did not indicate his future plans to continue his doctoral studies at a later date.

Steve Speer earned his Master's degree from University of Arizona. Mr. Speer asked for a leave of absence due to personal reasons after receiving his Master's Degree. Mr. Speer did not resume his NDSEG Fellowship after his leave of absence. He did not indicate his future plans to continue his doctoral studies at a later date.

Carmelita Ervin earned her Master's Degree from Louisiana State University. Ms. Ervin indicated she wished to withdraw from the NDSEG Fellowship Program after earning her Master's Degree. She stated she accepted a job opportunity in January 1994. Ms. Ervin did not indicate her future plans to continue her doctoral studies at a later date.

Randall Villeneuve withdrew from MIT before earning his Master's Degree. Mr. Villeneuve indicated he needed to withdraw from the NDSEG Fellowship Program due to personal reasons. He did not indicate his future plans to continue his doctoral studies at a later date.

### 1992 Selections

Mohsinuddin Ansari attended MIT's electrical engineering program. Mr. Ansari withdrew from graduate school before completing the NDSEG Fellowship due to personal reasons. Mr. Ansari indicated his intention to return to MIT and complete his Ph.D. after an absence of a year or two.

70

Jeremy Kahn attended the University of California, Berkeley's mathematics program. Mr. Kahn withdrew from graduate school before completing the NDSEG Fellowship.

James Mullner received his Master's degree from Pennsylvania State University before transferring to Carnegie Mellon University's manufacturing science program. Mr. Mullner withdrew from graduate school before completing the NDSEG Fellowship for personal reasons.

### 1993 Selections

Lapoe Lynn earned his Master's degree from University of California at Berkeley. Mr. Lynn accepted a full-time position at Analog Devices, Inc. He did not indicate his plans to continue his doctoral studies at a later date.

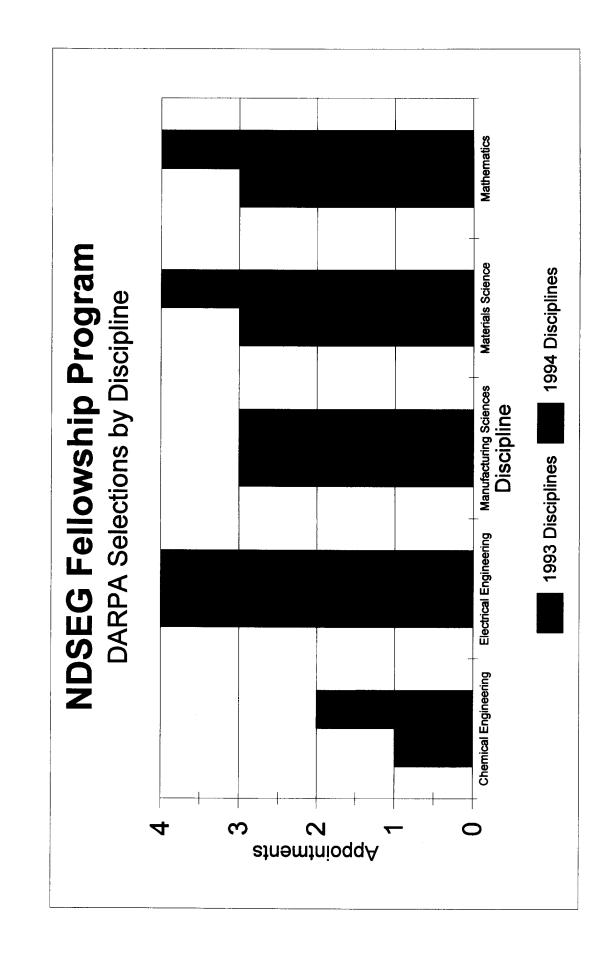
Frederick Hildebrandt dropped out from University of California at Berkeley in spring 1995. He did not write a formal letter asking to be removed from the program. Mr. Hildebrandt's academic advisors stated his grades were unsatisfactory and he failed his qualifying examination.

Kenneth Quon completed two years of graduate school at Stanford University. He did not receive his Master's degree. Mr. Quon asked for and received a leave of absence for personal reasons from the NDSEG Fellowship. He was not awarded another fellowship, but indicated he plans to continue his doctoral studies at a later date.

### 1994 Selections

Lisa Evans completed two years of graduate school at John Hopkins University. She did not receive her Master's degree. Ms. Evans asked for and received a leave of absence for personal reasons from the NDSEG Fellowship. She was not awarded another fellowship and did not state any plans to continue her doctoral studies at a later date.

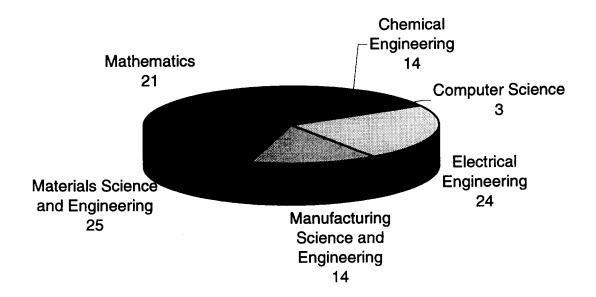
Jennifer Jewett van Antwerp completed one year of graduate studies at University of Illinois—Urbana Champaign. Ms. Jewett accepted the Whitaker Foundation Fellowship, which began on September 1, 1995.



# **DARPA-NDSEG Disciplines**

isciplines	1989	1990	1991	1992	1993	1994	Totals
\eronautical and Astronautical Engineering	0	0	0	0	0	0	0
3iosciences (includes Toxicology)	0	0	0	0	0	0	0
hemical Engineering	2	3	4	2	1	2	14
hemistry	0	0	0	0	0	0	0
ognitive, Neural, and Behavioral Sciences	0	0	0	0	0	0_	0
Computer Science	3	0	0	0	0	0	3
_lectrical Engineering	7	2	4	3	4	4	24
ieosciences	0	0	0	0	0_	0	0
Hanufacturing Science and Engineering	0	2	4	2	3	3	14
Materials Science and Engineering	7	3	5	3	3	4	25
wathematics	3	3	4	4	3	4	21
echanical Engineering	0	0	0	0	0	0	0
aval Architecture and Ocean Engineering	0	0	0	0	0	0	0
Oceanography	0	0	0	0	0	0	0
Physics( includes Ootics)	0	0	0	0	0	0	0
Totals:	22	13	21	14	14	17	101

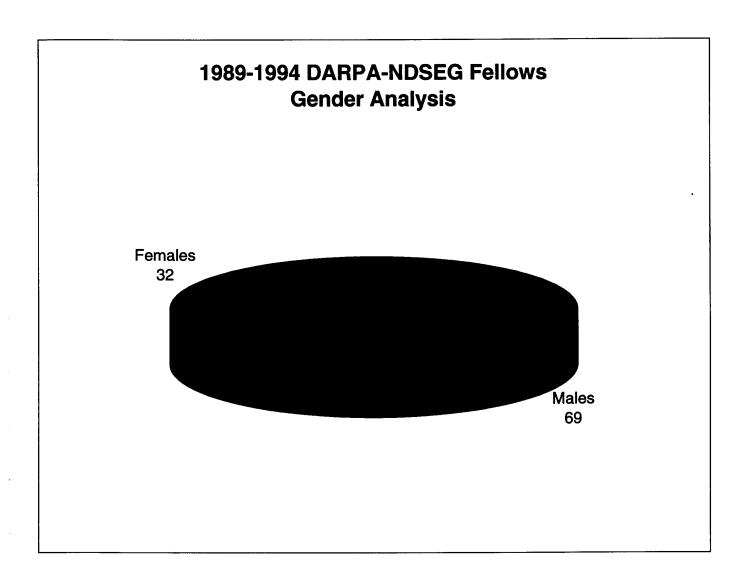
# 1989-1994 DARPA Fellows Discipline Analysis



### 1989 - 1994 DARPA-NDSEG Fellows Ethnicity Table

Ethnicity
African American
Asian
Hispanic
Non-Minority
Pacific Islander
American Indian
Other
Totals

Males	<b>Females</b>	Totals
3	2	5
1	3	4
4	0	4
59	26	85
0	0	0
1	0	1
1	1	2
69	32	101



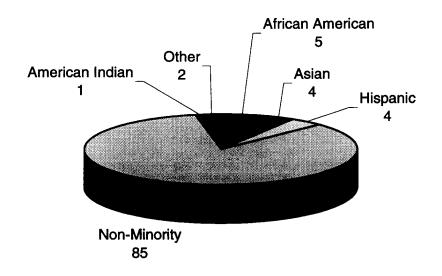
### 1989 - 1994 DARPA-NDSEG Fellows

 /lales
 69

 remales
 32

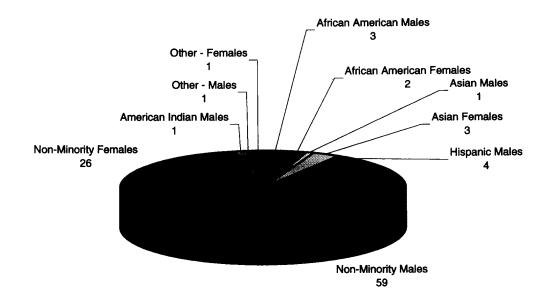
 Jotal:
 101

## 1989-1994 DARPA-NDSEG Fellows Ethnicity Analysis



African American	5
Asian	4
lispanic	4
Non-Minority	85
^merican Indian	1
)ther	2
Total:	101

## 1989-1994 DARPA-NDSEG Fellows Ethnicity Analysis



\frican American Males	3
African American Females	2
Asian Males	1
\sian Females	3
Hispanic Males	4
Non-Minority Males	59
Ion-Minority Females	26
American Indian Males	1
Other - Males	1
)ther - Females	1
Total:	101

Attachment G: Comments from former fellows.

The former fellows' appreciation of DARPA's support is reflected in the following comments.

Tao Alter wrote: "The work I did as an DARPA fellow has been published in one conference and one journal, and it led to additional research which is expected to become two more journal publications. Thank you for those years of support."

Mary Boyd wrote: "The DARPA fellowship allowed me the opportunity to pursue a PhD after working and being away from the academic environment for several years. Without the support, . I would not have returned to school. I am extremely grateful."

Paul Desch wrote: "The DARPA fellowship was responsible not only for the opportunity to pursue the PhD, but was also instrumental in my attaining recognition in the scientific community. It enhanced my ability to obtain a graduate research assistantship at the Center for Materials Science at Los Alamos National Lab. The DARPA fellowship played an integral part in my successful completion of this research project. Best wishes in obtaining and administering future awards in the DARPA fellowship program. I hope that Congress continues to fund these important awards, as they are essential for developing quality scientists to further the Nation's technological superiority."

Matthew Dejneka wrote: "Thank you for your assistance over the past three years. I hope that I will be able to develop technologies at Corning that will boost the US economy and technological prowess to fulfill DARPA's mission in the NDSEG fellowship."

Burt Fowler wrote: "I would like to take this opportunity to thank you, your coworkers and all of those involved in the NDSEG fellowship program. The fellowship was a great help to my wife and me for the past three years. Once again, thank you, and keep up the good work."

Carlos Gonzalez wrote: "Thank you very much for the excellent service your office offered me during the past three years. I can sincerely say that my experience as an NDSEG fellow was very positive. Once again thank you for always begin prompt to my requests and especially for always sending the stipend on time the first day of the month!"

Sigal Gottlieb wrote: "I thank you so much for this wonderful opportunity!"

Brian Grady wrote: "The fellowship was a wonderful benefit. It certainly was a major factor allowing me to do well in graduate school."

Douglas Hague wrote: "I won the Dow Chemical Award for PhD work in ceramic processing. I now work on ceramic TBCs and am funded through DARPA. I am currently running an DARPA-sponsored program, MDA972-95-3-0039, which directly impacts DARPA."

Tr :

Diane Hoffoss wrote: "Thank you for giving me such a wonderful opportunity to pursue a PhD in mathematics with full concentration without having to worry about supporting myself. I have

accomplished much more in these three years than I would have with the additional responsibility of being a teaching assistant. I've used the time to foster a strong background in topology, and now that my coursework is completed I'm much more able to devote some time to teaching to support my studies. I'm very grateful for the powerful start you have given me in my graduate studies. I feel confident as I begin my dissertation research."

Christopher Hoppel wrote: "The fellowship was extremely helpful in allowing me to be an independent research engineer. It helped me start a productive career in the research and development of composite materials."

Martha Jones wrote: "I am happy to have the opportunity to update you and to reflect on the positive impact that being a DARPA fellow has had on my graduate career. In writing my thesis, I have come to recognize the significant impact that the freedom of outside support has had on my work. I am grateful for the opportunity I had to work with III-V semiconductor chemistry and growth techniques - without outside funding, there is little doubt that I would not have been able to explore that project at tall, as our other research money is rather strictly tied to Si and Ge work. I feel very strongly that the fellowship programs should continue to receive funding."

Ellen Lackey wrote: "I give my strongest support for continued funding of the fellowship program. My participation in the program provided research and travel opportunities that would have not otherwise been possible."

Walter Laird wrote: "Thanks for everything! The program could not have gone any smoother for me. Your support has been outstanding. I was offered a position that I could not turn down and I use directly many of the skills learned because of your program at Johns Hopkins University."

Jane Simmons wrote: "Thank you for the fellowship: the program was very well run."

Anthony Yen wrote: "I am currently employed as a member of the technical staff at the Semiconductor Process and Design Center of Texas Instruments Inc., working on advanced lithography technology. This technology is critical to the survival and success of the US semiconductor industry, an industry vital to our national defense. Therefore, in my case, the purpose of the NDSEG fellowship - to increase the supply of US citizens trained in disciplines of science and engineering of military importance - has been fulfilled."